9. ENHANCING SMALLHOLDER TREE FARMS IN PRIVATE LANDHOLDINGS: A REFORESTATION APPROACH ANCHORED ON FAMILY, SCHOOL AND COMMUNITY

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INTRODUCTION

Forest resources degradation, aside from being an ecological problem is also a socio-economic menace. An awareness of the need to conserve, protect and manage the forests or trees has spurred a gamut of well-meaning advice and recommendations on how such a problem can be averted. Much has been done as attempt to put back the forest into its functional form but efforts still fall short of expected results.

With this, there is a need to develop sustainable management systems for the production of sufficient tree population. This calls for participation of a great mass of people so that directive programs on reforestation would not just be more of an institutional responsibility but a community or people's concern as well. The future can never be bright unless every Filipino, every family, realizes the senseless destruction of country's forest and subsequent adverse effects on the environment and ultimately on the quality of life of the people. Therefore, an approach to reforestation should be one which has affinity to cultural values which could insure permanence or sustainability of efforts. In consideration of Filipinos having strong family ties, families could be harnessed as a strong force for tree conservation undertakings. Hence, this Family Approach Reforestation, and hopefully the plight of the uplands and resource-poor families may no longer remain to be a 'thorn' of national conscience.

GENERAL CONCEPT OF THIS REFORESTATION APPROACH

This approach to reforestation is a permanent and continuing tool for appreciation of the total value of trees in the ecology and their usefulness as a sustainable livelihood option for the family. Unlike other reforestation approaches, this one shall essentially be done not in timberlands but in homesteads, along farm boundaries and irrigation canals and in every vacant space of private landholdings. It is family approach in the sense that it is basically anchored in our time-honoured culture of giving value to strong family ties and harnessing the same for tree conservation undertakings or concerns. In context, it is putting the whole family together as corporate body doing and managing a tree farm.

Family participation in tree conservation programs should be linked to the family's need for economic survival. To think that many, if not most of the rural families are living on scanty produce, their resources are not even sufficient to meet daily food and shelter needs. This reforestation approach is envisioned to meet the economic needs of the family, to include the education of the children. The investment the family would put up by way of planting short-rotation tree crops with high commercial value would be a gainful undertaking, serving as a '*scholarship'* for their children's succeeding educational pursuit in the future. In totality, this program would bring all-together the forces of the DENR, DepEd and barangay LGU in seeing to it that families and school children would not just be '*tree planters'* but '*reapers*' of financial benefits.

OBJECTIVES

Family approach reforestation has the following as its objectives:

Educational

1. To enlighten further and inculcate to parents and children the value of tree conservation.

2. To motivate every rural family to undertake tree planting in their farms and other landholdings.

Ecological

1. To enhance the protective role of trees against destructive radiation and strong winds.

2. To produce additional plant biomass for energy storage and nutrient re-cycling.

Economic

1. Produce farm timber for household needs as fuelwood and construction.

2. Serve as an alternative source of income of the family for their children's education.

METHODOLOGY

Participants and Initial Phase of Implementation

1. Participants to this program shall be families with children in Grades 2, the reason being that the succeeding years their children are in school should coincide with the cutting rotation of the trees. For example, for trees planted by Grade 2 pupils, trees could be harvested 8 years hence or by the time they are Fourth Year High School. The proceeds therefore could be used by the family for their *college scholarship*. This may not mean however that children of other Grades could not participate, nor families with no children in Grades school.

2. The Agencies/institutions Involved:

   DENR – provides technical assistance from planting materials production to products marketing and in information and education campaign (IEC).

   DepEd – assists DENR in IEC and in seeing to it that school children are sufficiently guided in their participation in the program.

   LGU-Barangay – provides assistance in the selection of alternative sites for tree planting and in IEC.

3. To ascertain success of this program this has to be piloted first in Region 8, particularly in ten (10) barangays in Palo, Leyte.

Information and Education Campaign (IEC)

1. Under the leadership of the DENR and in collaboration with the Department of Education (DepEd and Local Government Units (LGUs), a massive IEC shall be undertaken.

2. This shall be done in every barangay and every elementary and high school. The IEC shall be done in school strictly requiring the attendance of parents.

3. On this, an IEC Team from the DENR shall go from one barangay to other in close coordination with concerned DepEd staff and LGU officials.

4. In collaboration with DepEd, DENR shall prepare the IEC materials.

Where This Tree Planting Will Be Done

1. This Family Approach Reforestation will be in private landholdings and/or farms.

2. Farms in the uplands are included in this program

3. Families without farms of their own may consult barangay leaders where they can possibly plant trees within the jurisdiction of a barangay provided the area is proximate to their residences; or they can negotiate with landowners in the area for this purpose.

4. Tree planting shall be done along farm boundaries and irrigation canals and available vacant space in the farm and/or backyards.

Sources of Planting Materials

1. Initially, tree planting materials could be sourced from CENROs.

2. School nurseries would be alternative sources. On this, DENR shall assist elementary and high schools in putting up a tree nursery.

3. The family themselves can grow the seedlings with the assistance from the DENR.

4. Tree species that are fast-growing and with commercial value like *Gmelina, bagalunga* (a native tree species) and others shall be top priority trees for planting.

Tree Care and Management

1. It shall be the prime duty of every participating family to plant, take care and manage the trees.

2. The DENR in collaboration with DepEd shall teach the families the rudiments of tree care and management.

3. Among family members it shall be the children who should be principally responsible in this undertaking. Parents will just assist them.

4. Participating families should register the trees they planted with the CENRO.

Tree Harvesting, Processing and Marketing

1. Trees every family planted could be harvested, following cutting rotation prescribed for every tree species.

2. To ensure sustainability of tree population right after planting, tree planting shall be done to replace the cut tree.

3. As may be needed, a small economical sawmill may be allowed in each barangay for the processing of the timber to lumber for value-adding purposes. This sawmill shall be put up/managed by a private entrepreneur or by a cooperative among family tree growers. As such, what will be sold in the market will be lumber not round timber anymore.

4. But the family tree growers may still opt to sell his product in timber form.

5. The DENR shall provide the family tree growers with all the technical assistance pertinent to harvesting, processing and marketing.

SCHEDULE OF ACTIVITIES

ACTIVITIES	Y1				Y2	Y3	Y4	Y10	Y11
	Q1	Q2	Q3	Q4					
1. IEC									
2. Production of nursery seedling									
3. Tree planting									
4. Care and maintenance									
5. Harvesting, processing & marketing									
6. Re-planting									
7. Provision of technical assistance by the DENR									

COST ESTIMATES

1. For IEC (on a barangay basis)

   a) Production of IEC materials: PhP5,000.00/barangay/year

   b) Conduct of lectures/seminars:PhP3,000.00/baragay/year

2. Production of tree seedlings: PhP5.00/seedling/year (per seedling basis)

3. Provision of technical assistance: PhP20,000 for two persons/year (transportation expenses of DENR personnel on per travel basis)

In pilot scale, i.e., 20 barangays, total project cost would be to the tune of PhP525,000.00 in Year 1. But in succeeding years the cost could be reduced substantially because seedlings and IEC materials production would already be minimal. Seedling production cost in Year 1

could reach about PhP375,000.00 for 75,000 seedlings. The total cost in 8-10 years time is PhP1,345,000.00. The PhP500,000.00 amount in Year 8 will be mainly for the purchase of harvesting and processing equipment like chainsaws. Breakdown of expenses or investment is shown in Table 1.

Table 1. Distribution of project cost estimates (in pilot scale).

Items	Cost estimates ('000)										TOTAL
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
1. Production of IEC materials	100							100			200
2. Conduct of IEC	30	30						30			90
3. Seedling production	375	10					10				395
4. Site visitation/ provision of technical services	20	20	20	20	20	20	20	20			160
5. Tree planting											
6. Care and maintenance											
7. Tree harvesting, processing and marketing								500			500
TOTAL	525	60	20	20	20	20	30	650			1,345

Note: Labour in tree planting and care and maintenance will be the counterpart of the families.

DERIVABLE BENEFITS

The investment in terms of finances that shall be put into the operation of this Program will definitely serve a long way and would amass tremendous benefits for the environment and the family. The above-ground biomass that would be produced out of the planted trees could be functionally helpful in installing balanced beneficial relationships among several biological components of the farm ecosystem. Within the rotation period, these dynamic interrelationships would be a pervading sight in the farm.

In addition, the economic benefits which could be derived would also be relatively colossal. Eight (8) to ten (10) years after planting, fast-growing trees like Gmelina and Bagalunga would have a net timber volume of approximately 0.35 cu m or 148 bd ft/tree. At 60% mill or wood processing recovery, net lumber volume which could be produced would be about 88 bd ft. Assuming that 8 -10 years from now the farm-gate price of lumber would be PhP15.00/bd ft, a family could earn a total of PhP1,320/tree. Deducting about PhP200.00/tree as cost for harvesting and processing, finally a family could have a net

income of PhP1,120/tree. If a family planted and maintained 100 trees, then it would be wealthier by PhP112,000, more than enough to send 2 children to college at a regional state university.

Assuming that there are 30 children in Grade 2, for 20 schools we will have at least 60,000 trees giving an aggregate income to families with an awesome PhP67,200,000.00 in 8-10 years time. If nationwide we have to raise 1 billion trees, we can just imagine how much income our country can realize out of this Program.